

M.A.C.E. JOURNAL

"Devoted Exclusively To The Atari Computer User"

MID-TERM EXAMINATION GENERAL STUDIES 101

NAME _____ CLASS _____

DIRECTIONS: Answer all questions. You have one hour. Do not use notes.

PSYCHOLOGY

1. Based on your knowledge of their works, evaluate the emotional stability, degree of adjustment, and repressed frustrations of the following: Alexander The Great, Hammurabi, Gregory Of Nicea, Ramses II.

BIOLOGY

2. Create life. Estimate the difference in subsequent human culture if this form of life had developed 500 million years earlier, with special attention to the English parliamentary system.

HISTORY

3. Describe the history of MACE from its origin to the present day, concentrating especially on its social, political, economic, religious and philosophical impact on Europe, Asia, America, and Africa. Be brief and concise.

MEDICINE

4. You have been provided with a razor blade, a piece of gauze, and a bottle of scotch. Remove your appendix.

PHILOSOPHY

5. Sketch the development of Human thought; estimate its significance. Compare it with the development of any other kind of thought.

GENERAL KNOWLEDGE

6. Describe the universe and give three examples.

SPECIAL EDUCATION ISSUE!

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THE HOME COMPUTER SHAKEOUT--IS ATARI NEXT?

By Len Malysz

It's almost as if a giant hand reached into the microcomputer marketplace, turned it upside down, and gave it about a half-dozen good snaps of the wrist. Those that have fallen out include Osborne, now in bankruptcy, and Texas Instruments, which recently abandoned the home computer market. Those left are having problems, ranging from Coleco's startup delays with Adam, to Commodore's 30 percent defective return rate on shipments of its successful 64. Even Apple is losing ground.

The news out of Atari by way of its parent, Warner Communications, is not good either. The transfer of about 4,000 manufacturing jobs from Silicon Valley to Asia earlier this year was in response to the glut of unsold video game cartridges left over from last Christmas and the vicious price war in home computers that's been plaguing the industry. This wasn't enough to forstall a \$122-million loss for the third quarter, bringing total losses for the year to a staggering \$425 million.

In an effort to turn things around, Warner chairman Raymond Kassar was replaced by former Philip Morris marketing executive James J. Morgan, and within the past several weeks three top ranking Atari executives unexpectedly resigned and nearly one-third of the staff at corporate headquarters was laid off.

Speculation is rife that Warner may throw in the towel, in spite of the fine reviews on Atari's 600 and 800XL line of home computers, and pending introduction of two new products--the combined computer and telephone known as AtariTel, and a personal computer that is IBM compatible. As this is written, hard decisions are being made regarding the future of our favorite home computer, and may in fact be released before we go to press. Whatever the outcome, the question remains--what do we do about it?

My answer--enjoy your computer, use it for the reasons you bought it in the first place,

and expand its capability with any fire sale prices you may encounter. As an example of the latter point, I supplemented my Atari 800 system that is used primarily for word processing with an Atari 400 that was discounted by a major retailer to an after-rebate price of \$29. The 400 is permanently quartered next to the family room television set where the kids can use it as an alternative to some of the more questionable "entertainment" that is broadcast over the air. Guess what? Not only are they using it to play Pacman and Star Raiders, they're using the language tapes series from Atari along with Programming 1, 2 and 3 to help with their studies in school. We're now discussing a disk drive and 48K upgrade if and when prices make that decision more attractive.

Now that the almighty IBM PC Jr has been announced, many are wondering what all the excitement was about. That point is particularly well made when its features are compared to what Atari has been offering since the initial introduction of the 400/800 series. For example, can the PC jr talk to you through a television speaker in foreign tongues and teach you a language? My \$29 Atari 400 can. Can it play music in four voices? My \$29 Atari 400 can. What can the PC jr do? We won't really know until the basic units are shipped after the first of the year--at a price just under \$700! Until then, I'll just continue computing with my \$29 Atari 400, which has a full screen editor, 256 color hues, upper and lower case keyboard, etcetera, etcetera.

One positive note regarding the IBM PC jr. Its pricing has now created an umbrella under which other home computer manufacturers can structure their products in terms of features and prices. Since IBM is not known for discounting its products, prices should stabilize throughout the industry and consumers will be able to make a buying decision with confidence.

Late word out of Atari is that they are forging ahead with production of the 600 and 800XL line for Christmas buying season. Who knows, maybe Santa will rescue Atari from a blue Christmas and bring back some fun and good cheer to the Atari computer enthusiast.

EDITORIAL

By Marshall S. Dubin

I thought I was retired! When I gave up the Presidency recently, I expected to spend the Winter along with the rest of the retired officers aboard the MACE yacht 'Sunnyvale's Mistake' We had it all arranged to sail around the world, spending the Winter months romping about sun drenched exotic hideways - the kind you read about in American Express brochures - our hearts and minds free of all that which we left behind us.

That's why when BunnyLee, our cabin attendant informed me there was a message for me on the ship to shore BBS, I expected it only to be the hotel in Puerto Vallarta informing me that our reservations for January and February had been confirmed.

Boy was I wrong. I seems that Chris had other obligations, and the club needed someone to take over the newsletter. The 'Sunnyvale', swaying gently in the early morning ocean breeze made my mind wander to strange new exotic beaches and all the wonderful adventures I looked forward to along with those others in the exclusive MACE Ex-Officers Sun & Fun Club.

However the persistent CRT on my ship to shore AMIS-400 system began to jar me into reality (an unfortunate, but often necessary state). "...and so we need you RIGHT now. The trip will have to wait-the mag comes first...blah,blah,blah." I could only sigh.

Actually now that I'm back, it IS good to be here again. I really enjoyed doing the newsletter last time (2 years ago) and I look forward to it now. We are always trying to make this newsletter the best Atari related journal ever!

Now for a bribe. That's right folks, a bribe! We are always looking for contributions to MACE journal. Over the years we have had many excellent articles, how to do its, reviews and comments by our readers.

To keep providing you with a quality journal each and every month, we need to CONSTANTLY be requesting submissions from

our readership. (This is probably because we don't pay anything!)

Well, this is the deal. Send in your contributions (articles, reviews, new product information, helpful hints, etc.). Each month we will select the best submission. The winner will be awarded his or her choice of any TWO (2) MACE library disks (or tapes) or any ONE (1) MACE proprietary disk. The rest of you will just have to be content with the honor and priveledge of knowing that your selfless contribution to computer literacy and home computer journalism will go to benefit all of mankind (at least all of our readership). And you can brag to your friends that you had your very own work published in a national publication!

BIG COVER CONTEST! (MORE BRIBES!) Yup. This ones for all you artists and graphically creative types. We need to get some new front cover art. Our standard diskette front cover wasn't actually meant to be used for more than one issue. It became the standard since 1) we could not get anyone to do additional covers, and 2) we were too lazy and cheap to do them ourselves. Well how about this!

Do a front cover design. If it is in reasonably good taste, is appropriate to our journal, and we select it for use for a particular issue, you will win a years FREE membership to MACE, or \$25.00 worth of MACE software (disk or cassette)! Here are the rules!

Cover art should NOT be in color. Line drawings (black pen and ink or highly contrasted drawings should be ok). We cannot use a color original (remember this ain't Time/Life)!

Format should be square to conform to our normal masthead. See this months front cover for an idea of the proportions.

This contest and the monthly software prizes will be ongoing unless we say otherwise, so send your stuff to!

MACE JOURNAL
MARSHALL S. DUBIN, EDITOR
3237 DORAL DRIVE
ROCHESTER, MICHIGAN 48063

PRESIDENTIAL RAMBLINGS

by Mike Lechkun

What the cold months of winter ahead, I'm sure looking forward to spending more time with my ATARI 800. It will also be nice to see larger sized audiences at our meetings, now that summer vacations have ended and people are taking a break from the hustle and bustle of the coming holiday season. I do hope you find things to your liking and leave here entertained and informed.

Well, the folks at Itty Bitty Machines finally have unveiled their long awaited "Peanut" of a computer. With 64K and a detachable "wireless" keyboard -- no, its not done with mirrors, just infrared light. Sure to create havoc with any TV remote controller you have in the room. You can get it also with 128K and disk drive. The "PCjr", as it will be known as, sports a 16 bit microprocessor, 16 color graphics, and three-octave sound generating capabilities. It will run just under \$700 for the 64K version, and under \$1300 for the 128K & disk. The units will be warranted for TWELVE months and should be available after

Christmas. Plenty of time for ATARI to dump their tons of old machines & meet the challenge of the giants in computerland.

RUMOR MILL! Texas Instruments to just let their copyright rights to the TI99/4 slide by??? Hmm... I was surprised to see them bail out of the home market. But not very surprised.

The saga of the Presidents disk drive goes on! Its a damn shame it takes the letterhead of the largest user group in the land to get any action out of the knuckleheads in Sunnyvale. They've promised a new, completely tested and WORKING 810 for me after nine months of sheer misery with the old one. Any person with the same recurring problems like mine should expect satisfaction with out having to "pull rank" on anyone because of my position. I'll bend your ear about it after the meeting if you see me.

Have a safe and peaceful Thanksgiving! See you in December with a DY-NO-MITE program on TELECOMMUNICATIONS!



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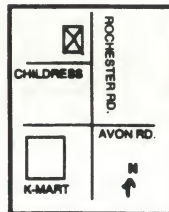


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SOLVING QUADRATIC EQUATIONS

By Carl Stebner

Algebra students, whether in high school or college, are eventually faced with the problem of solving quadratic equations. Quadratic equations are also called second degree equations. They are characterized by the independent variable being raised to the second power and can be written in the form:

$$aX^2 + bX + c = 0$$

The terms a, b, and c do not include X. A cannot equal zero (0), or the equation is not quadratic.

To solve the equation means to find the value of X. In a quadratic equation, there are two "roots" or solutions. Two ways to find the roots are factoring and completing the square. However, a universal solution is given by the quadratic formula:

$$X = \frac{-b \pm \sqrt{b^2 - 4ac}}{2a}$$

The following is a short program to evaluate the roots of any quadratic equation, using the quadratic formula. In line 20, the terms a, b, and c are requested and must be inserted in order. If no b or c term is in the formula, then input zero(0).

Lines 30-35 calculate the value under the square root sign (the discriminant) so that the computer can give a numerical answer. The value 0.5 is added to eliminate the computer's rounding errors. Depending on the value of D, the roots have different forms. Lines 40-60 check this. Lines 70-80 calculate the roots if D is non negative then the answer is printed.

If the term under the root is negative, the term cannot be calculated on the computer nor further reduced mathematically.

Basically, the square root of -1 is undefined. That is, there are no two equal numbers which, when multiplied together, gives -1. Therefore, the square root of -1 is usually given an alpha designation, I in this program. Numbers which contain the square root of a negative number are called imaginary.

Lines 200-245 calculate the roots when the discriminant is negative. Line 200 recalculates D using the variable E with the terms re-arranged so the result is positive, realizing that -1 can be factored out and

defined as I, as noted above. Line 200 could be written like line 30 and then an extra line, 201, E=ABS(E), added with the same result.

Also the roots may be rewritten, as is done in lines 210 and 220, to separate out the imaginary part of the root. Many quadratic roots do not fit easily into the standard form. In those cases, algebraic and arithmetic manipulation is necessary to obtain a single numerical value for a, b and c. That is to input $3*(2+\sqrt{3})$ will not be accepted by the computer. Also, to avoid errors when evaluating a, b, or c when they contain a square (or other) root, the number needs to be extended far enough to the right of the decimal point. Otherwise peculiar results will be obtained.

```

5 DIM G$(10)
10 PRINT "THIS PROGRAM CALCULATES
THE ROOTS OF A QUADRATIC
EQUATION, A*X^2+B*X +C=0"
20 PRINT "INPUT TERMS:";PRINT "A= ";
:INPUT A;PRINT "B= ";:INPUT B;
PRINT "C= ";:INPUT C
25 PRINT:D=B^2-4*A*C:D=INT(D+0.5)
40 IF D<0 THEN PRINT "ROOTS IMAGINARY
AND UNEQUAL";GOTO 200
50 IF D=0 THEN PRINT "ROOTS REAL AND
EQUAL"
60 IF D>0 THEN PRINT "ROOTS REAL AND
UNEQUAL"
70 R1=(-B+SQR(D))/(2*A)
80 R2=(-B-SQR(D))/(2*A);PRINT
90 PRINT "FIRST ROOT IS ";R1;PRINT
100 PRINT "SECOND ROOT IS ";R2;PRINT
110 GOTO 250
120 END
200 E=4*A*C-B^2
205 E=INT(E+0.5)
210 X1=-B/(2*A)
220 X2=SQR(E)/(2*A)
225 PRINT:PRINT "FIRST ROOT IS ";X1;" +
";X2;" * I"
235 PRINT:PRINT "SECOND ROOT IS ";X1;" -
";X2;" * I"
245 PRINT:PRINT "WHERE I= SQUARE ROOT
OF -1"
250 PRINT "ANOTHER PROBLEM? YES OR
NO";
255 INPUT G$
260 IF G$="YES" THEN GOTO 20

```


ACROSS THE POND

by LES ELLINGHAM

(Editor PAGE 6 magazine and member
of Birmingham User Group - England)

Greetings from fellow Atari users in the U.K. I hope that I can bring you through this column a taste of what Atari computing is all about in the U.K. and also bring you news of any developments over here.

A couple of hundred years ago we could claim to lead the world in most things and what was new in the way of technology (such as it was) came from Britain. Not so today as in many respects, including Atari computing, we have to look to the West. The biggest problem in writing a column such as this will be to bring you news, for most of the new developments in hardware and software originate in the U.S. and what is hot news to us is generally pretty cool to you. Still there are some good things beginning to develop over here and I will bring you news of any interesting software.

To begin with though, what is it like being an Atari owner in the U.K.? I should imagine it is very similar to owning an Atari in the U.S. about 18 months ago. User groups are just beginning to find their feet and authors are taking their first steps in commercial software. One or two have pitched right in and produced some really fine stuff first time out. The one thing that is missing for the average user is the sense of excitement at new discoveries - it is still there to a degree but with so many books now available, most things can be read about rather than discovered by experimentation. Looking back through some old User group newsletters from America, I can see that it must have been quite exciting to come across some little routine that no one else - not even Atari - knew existed.

What of Atari in the U.K.? They seem to have some well meaning folks who

would like to support the User groups but don't know quite how. One very strange situation is the apparent total lack of communication between Atari in Silicon Valley and Atari (UK). Believe it or not most dedicated users knew of the new machines from Antic magazine before Atari (UK) had heard of them!

What about this strange phenomenon you seem to be raving over - artifacting? Over here, forget it. No one could understand what all the fuss was about, true you get colours but are those wishy-washy reds, greens and blues really worth all the fuss? No one thought so until at a recent meeting of B.U.G. a software developer showed an American 800 and monitor. What a difference! There really are colours in all those programs. A.E. and David's Midnight Magic are not slightly tinted black and white after all! No wonder there are so many articles on artifacting, but for the majority of users over here it is a non starter - it will just not work on the PAL system.

I'll sign off with news of a couple of software items developed over here which I am sure you will find interesting. The first is A.C.E. - The Atari Cassette Enhancer which is a utility for cassette owners which allows programs to be verified on tape without losing the original from memory. It also names programs similar to a disk drive and can then search a tape and run the program you want. No need to know where on the tape the program is. Lots of other things are included too and it sells at the remarkable price of £7.95, that's about \$12.50. The second item is an arcade game called Encounter (at least it is at the moment). It is excellent - full 3D and just like Battlezone except that it has solid obstacles instead of outline. The programmers are setting up a deal for distribution in the U.S. at the moment and the program should be out at the end of the summer. Watch out for it, it ranks among the best produced so far and promises great things from England. Watch out for more in my next column.

APPLE WHO? AND THE 64's

OR

SHOULD I KEEP MY ATARI IN THE CLOSET

By RICHARD GIZYNSKI

When I first bought my Atari, I was a little nervous. Did I buy the right machine. Maybe an Apple would have been better, more expensive but better. Or maybe a Commodore? After all, one of my heroes, Capt. Kirk, recommended Commodore products and ...

This summer I got a chance to take a long look at the competition. First I had to keep in mind that I was a little biased. I've written a lot of good stuff on my Atari and am used to it's many nice features. I had to resist the temptation to let familiarity stand in the way of a legitimate test.

The Commodore 64 was my first test machine. It plugs in like an Atari and is a little more compact and cheaper too. Hmmm, maybe Kirk was right. Well let's try it out. The screen comes up in a washed out blue on blue, annoying but not too difficult. The keyboard was my next problem. Sometimes what I typed in would take and sometimes not. Oh well, maybe it was just a defective model. Try the graphics.

The Commodore 64 has colors accessible from keys with the colors marked on them. A nice feature. Unfortunately, every time I tried to mix graphics patterns and text, the text came out an unreadable smear. Maybe I got a machine with two defects. Well take it back and get a new one.

The new one, second one right out of the shipping carton, had the same defects. Maybe it's true that Commodore has a 40% failure rate from the factory. Could my hero have lied. Try the programming end.

Let's try a few print statements. Whoops! Commodore has capital and lower case letters but you can't use both (or at least I couldn't find out how to use them) in

the same program. You can have all your printed messages, checkbook names, player names etc. in all caps or all lower case but not both. Oh well, not too important.

I entered my program flawlessly. Or so I thought. It isn't until the program runs that the machine comes up with SYNTAX ERROR. A rotten break for a beginner, and I was a beginner with this machine. The situation was a little worse than I expected because of the poor keyboard response. At least I had the nice features of easy correction of errors in the lines when I made mistakes.

As an advantage, I did get to use the nice, advanced, subscripted string feature of Microsoft styled BASIC. Well, maybe not quite so advanced! Commodore strings are subscripted like Atari numbers are subscripted. The only trouble is, you can't use a string of more than 255 characters like when you want to look around in memory. Or when you want to use a machine language sort on a lot of names. Or when you want to relocate a string to move memory around. I think you get the point. Maybe my Hero to a bribe.

The Apple II Plus I look at was a different matter. Quality tells. The keyboard was reliable. Not many keys, but reliable. The system reset even worked sometimes. Control Reset worked all the time, well almost all the time. It just does something different. It doesn't restore the original set up. It acts like Atari's break key. Oh well, I can live with that.

I made a few typing errors in line entries. I looked around for cursor controls so I could fix the problem. Then I went to the manual and found the cursor controls are achieved by holding down the Control key and pressing the I, J, K or M keys. Oh well, I can live with hidden cursor keys.

The next thing that I had to learn to live with was the fact that it is easier to retype a line in Applesoft BASIC than it is to correct it. Not a very advanced feature. You can't enter a line from the middle of the line, Apple's read a line from where the cursor started on a line to where the cursor is. Yech! Don't they know that people make mistakes. They also left out the delete and insert keys. If you missed a letter or have one too many, retype the line.

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The Apple II Plus comes without lower case. Yes, that is an optional extra, just like having to buy tires on a car. The ability of hooking an Apple to a TV is an optional extra too. Not a bad idea if you have a need to get rid of a lot of extra money. But at least the graphics work if you can see past the static lines formed on the TV by electronic noise. I'll bet that Consumers report article that said you shouldn't do word processing on a computer using a TV as a monitor used an Apple II Plus.

I did get to use an Apple IIe. Fortunately they did correct the lack of lower case letters and the hidden cursor controls on the new improved version. They didn't correct:

Difficulty of correcting BASIC program lines.

Limited BASIC language that doesn't allow for long strings.

Very poor graphics control through BASIC.

No general Reset (resetting margins, graphics to text, etc.)

Very poor picture quality on TV screen. Worse than Commodore's (maybe Kirk didn't lie -- he just never saw an Atari)

Useless output to a cassette. (If you think Atari's has problems you haven't seen anything yet)

I thought maybe I was getting a little negative so I decided to list the things I liked on the other machines:

Commodore 64 --

Their colors and graphics are printed on their keys.

That's all I could think of.

Apple IIe --

Much friendlier DOS (you can use bigger names for programs)

Nice feel to the keyboard

Faster talking to disk.

Impress your friends because you had a lot of money to spend.

There probably are a lot more qualities to both machines that I didn't run into. My opinion is based on only two weeks with the Commodore 64 and about three weeks with the Apple II Plus. But based on that experience, it's a darn shame about Kirk.

SPELL PERFECT

Reviewed by
Martin A. Siml

LJK software has brought us another winner in their "Perfect" series of software. The series being Letter Perfect, Data Perfect, and now Spell Perfect, which are all capable of working with each other.

The software comes in a loose leaf notebook with extensive instructions. The software is on two disks. One side of disk one is Spell Perfect for the normal 40 column Atari, the other side contains a version for the 80 column enhanced Atari. The second disk contains a dictionary in double density on one side and the same dictionary in single density on the other.

They give you the capability to back up any of the series software with this offering, which was not previously offered. In fact they very strongly suggest that all software be backed up and the originals not be used.

The program can be used to check the spelling of words in a Letter Perfect file. The software is easiest used in a double disk set up, but can also be used with much disk switching in a single drive configuration. The program incidentally gives you a word count of the file, and how many different words are contained in the file. It also tells you how many words were compared with the dictionary, and how many did not match anything in the Dictionary. It shows you which words may be mis-spelled and allows you to make corrections. It will also show you a list of words which sound the same if requested.

The program allows for addition of words to the Dictionary. It also allows for more than one Dictionary disk. If you possess Letter Perfect, and have spelling problems, as I do this would be a great addition to your library. It compliments Letter Perfect nicely. Now if they could only come up with a program to correct my punctuation.

PRE-SCHOOL MATH

By Jerry Aamodt

Editors note: Here is a very popular pre-school math program that Jerry wrote some time ago, and which is available in the club library. The program provides modes for addition, subtraction and counting. Instead of numbers, objects are displayed such as kites, balls, etc. There is a choo-choo train that gets longer with every correct response. All in all this is a VERY GOOD way to introduce a pre-school child to math concepts and basic number skills.

```
10 REM PRE SCHOOL MATH by Jerry Aamodt
20 GOSUB 720:GOTO 610
30 ? #6;"":POSITION 1,1:? #6;"WHAT NU
MBERS FROM 1 TO 1(0)"
40 GET #1,Q:Q=Q-48:IF Q<1 OR Q>9 THEN
Q=10
50 CLOSE #1:GRAPHICS 7
60 REM ADDITION ROUTINE
70 ? #6;"":SETCOLOR 0,2,7:SETCOLOR 1,
INT(15*RND(0)+1),10
80 REPA=INT(Q*RND(0)+1):REPB=INT(Q*RND
(0)+1):SUM=REPA+REPB:IF SUM>10 THEN 80
90 GOSUB 580:X=10:Y=10:FOR I=1 TO REPA
:IF COLR=-1 THEN 110
100 SETCOLOR 0,COLR,6
110 COLOR 1:GOSUB 980:IF MULT<>-1 THEN
GOSUB 990
120 X=X+17:IF X+17>180 THEN X=10:Y=Y+3
0
130 NEXT I:PLOT 10,35:DRAWTO 16,35:PLO
T 13,32:DRAWTO 13,38
140 X=10:Y=60:FOR I=1 TO REPB:GOSUB 98
0:IF MULT<>-1 THEN GOSUB 990
150 X=X+17:IF X+17>180 THEN X=10:Y=Y+3
0
160 NEXT I:PLOT X-3,Y-1:DRAWTO X+3,Y-1
:PLOT X-3,Y+1:DRAWTO X+3,Y+1
170 INPUT GUESS:IF GUESS<>SUM THEN ? "
NO!";COUNT=0:GOTO 170
180 COUNT=COUNT+1:GOSUB 760
190 GOTO 60
200 ? #6;"":POSITION 1,1:? #6;"WHAT N
UMBERS FROM 1 TO 1(0)":REM SUBTRACTION
ROUTINE
210 GET #1,Q:Q=Q-48:IF Q<1 OR Q>9 THEN
Q=10
220 CLOSE #1:GRAPHICS 7
230 ? #6;"":SETCOLOR 1,INT(15*RND(0)+
```

```
1),10:SETCOLOR 0,2,7
,240 REPA=INT(Q*RND(0)+1):REPB=INT(Q*RN
D(0)+1):SUM=REPA-REPB:IF REPB>REPA THE
N 240
250 IF REPA>9 THEN 240
260 GOSUB 580:X=10:Y=10:FOR I=1 TO REP
A:IF COLR=-1 THEN 280
270 SETCOLOR 0,COLR,6
280 COLOR 1:GOSUB 980:IF MULT<>-1 THEN
GOSUB 990
290 X=X+17:IF X+17>180 THEN X=10:Y=Y+3
0
300 NEXT I:PLOT 10,35:DRAWTO 16,35
310 X=10:Y=60:FOR I=1 TO REPB:GOSUB 98
0:IF MULT<>-1 THEN GOSUB 990
320 X=X+17:IF X+17>180 THEN X=10:Y=Y+3
0
330 NEXT I:PLOT X-3,Y-1:DRAWTO X+3,Y-1
:PLOT X-3,Y+1:DRAWTO X+3,Y+1
340 INPUT GUESS:IF GUESS<>SUM THEN ? "
NO!";COUNT=0:GOTO 340
350 COUNT=COUNT+1:GOSUB 760
360 GOTO 230
370 ? #6;"":POSITION 0,2:? #6;"ENTER
LEVEL OF COUNT":POSITION 1,4:? #6;"1 T
O 20"
380 INPUT Q:IF Q>20 OR Q<1 THEN 370
390 GRAPHICS 7
400 REPA=INT(Q*RND(0)+1):? #6;"":SETC
OLOR 1,INT(15*RND(0)+1),10:SETCOLOR 0,
2,7
410 GOSUB 580:FOR I=1 TO REPA:IF COLR=
-1 THEN 430
420 SETCOLOR 0,COLR,6
430 K=INT(8*RND(0)):L=INT(5*RND(0)):IF
A(K,L)<>-1 THEN 430
440 X=INT(4*RND(0)+8)+(K*19):Y=INT(4*R
ND(0)+7)+(L*15)
450 COLOR 1:GOSUB 980:IF MULT<>-1 THEN
GOSUB 990
460 A(K,L)=1:NEXT I
470 INPUT GUESS:IF GUESS=REPA THEN 550
480 COUNT=1
490 ? #6;"":FOR K=0 TO 7:FOR L=0 TO 4
:IF A(K,L)=-1 THEN 540
500 IF A(K,L)=2 THEN ? COUNT
510 COUNT=COUNT+1:A(K,L)=2
520 X=8+(K*18):Y=8+(L*13):COLOR 1:GOSU
B 980:IF MULT<>-1 THEN GOSUB 990
530 SOUND 0,55,10,10:FOR P=1 TO 10:NEX
T P:SOUND 0,0,0,0:FOR P=1 TO 100:NEXT
P
540 NEXT L:NEXT K:COUNT=0:GOTO 470
550 COUNT=COUNT+1:GOSUB 760
560 GOSUB 750
570 GOTO 400
```



```

580 RESTORE 590:PICT=INT(11*RND(0)+1):
FOR SEL=1 TO PICT:READ LIN,REPS,MULT,C
OLR:NEXT SEL:RETURN
590 DATA 1050,3,2,-1,1060,4,8,7,1100,4
,10,13,1120,12,2,-1,1140,6,6,-1,1160,6
,5,0,1180,7,6,-1
600 DATA 1200,10,7,-1,1230,11,3,0,1250
,3,9,13,1270,4,8,9
610 GRAPHICS 2:POSITION 5,4:? #6;"PRE-
SCHOOL":POSITION 8,6:? #6;"MATH"
620 GOSUB 750
630 FOR P=1 TO 300:NEXT P
640 OPEN #1,4,0,"K":COUNT=0
650 ? #6;"?":POSITION 1,1:? #6;"DO YOU
WISH TO?"
660 POSITION 5,4:? #6;"ADD(A)":POSITIO
N 5,6:? #6;"SUBTRACT(S)"
670 POSITION 5,8:? #6;"COUNT(C)"
680 GET #1,K:IF K=65 THEN 30
690 IF K=83 THEN 200
700 IF K=67 THEN CLOSE #1:GOTO 370
710 GOTO 680
720 DIM SX(10),SY(10),A(8,5):X=7:Y=45
730 FOR I=1 TO 10:SY(I)=Y:X=7:Y=X+
(I*2):Y=Y-5+(I/2):NEXT I
740 RETURN
750 FOR I=0 TO 7:FOR J=0 TO 4:A(I,J)=-
1:NEXT J:NEXT I:RETURN
760 RESTORE 1330:? #6;"?":SETCOLOR 0,1
1,5:SETCOLOR 1,5,5:COLOR 3:X=10:Y=50
770 FOR I=1 TO 7:READ X1,Y1,X2,Y2:PLOT
X+X1,Y+Y1:DRAWTO X+X2,Y+Y2:NEXT I
780 COLOR 2
790 FOR I=1 TO 7:READ X1,Y1,X2,Y2:PLOT
X+X1,Y+Y1:DRAWTO X+X2,Y+Y2:NEXT I
800 FOR I=1 TO COUNT:X=X+13:RESTORE 13
10:COLOR 3
810 FOR J=1 TO 9:READ X1,Y1,X2,Y2:PLOT
X+X1,Y+Y1:DRAWTO X+X2,Y+Y2:NEXT J:COL
OR 2
820 FOR J=1 TO 5:READ X1,Y1,X2,Y2:PLOT
X+X1,Y+Y1:DRAWTO X+X2,Y+Y2:NEXT J:NEX
T I
830 FOR J=1 TO COUNT:FOR K=1 TO 30:SOU
ND 0,55,8,10
840 NEXT K:FOR L=1 TO 30:SOUND 0,0,8,1
0:NEXT L:NEXT J
850 IF COUNT<10 THEN SOUND 0,0,0,0:GOT
O 960
860 X=X+13
870 COLOR 2:RESTORE 1350:FOR I=1 TO 6:
READ X1,Y1,X2,Y2:PLOT X+X1,Y+Y1:DRAWTO
X+X2,Y+Y2:NEXT I:COLOR 3
880 FOR I=1 TO 5:READ X1,Y1,X2,Y2:PLOT
X+X1,Y+Y1:DRAWTO X+X2,Y+Y2:NEXT I
890 X=7:Y=45:X3=2:Y3=-5:SETCOLOR 0,0,1

```

```

5
900 GOSUB 1010
910 RESTORE 1290:FOR I=1 TO 4:READ REP
C,REPD
920 SOUND 0,150,10,10:SOUND 1,150,6,10
:FOR P=1 TO REPC:NEXT P:SOUND 0,0,0,0:
SOUND 1,0,0,0
930 FOR P=1 TO REPD:NEXT P:NEXT I
940 FOR P=1 TO 300:NEXT P
950 POP :GOTO 610
960 FOR P=1 TO 400:NEXT P
970 RETURN
980 RESTORE LIN:FOR J=1 TO REPS:READ X
1,Y1,X2,Y2:PLOT X+X1,Y+Y1:DRAWTO X+X2,
Y+Y2:NEXT J:RETURN
990 COLOR 2:FOR J=1 TO MULT:READ X1,Y1
,X2,Y2:PLOT X+X1,Y+Y1:DRAWTO X+X2,Y+Y2
1000 NEXT J:COLOR 1:RETURN
1010 COUNT=1:REM SMOKE AND TRAIN
SOUND
1020 FOR I=1 TO 10:FOR J=1 TO COUNT:FO
R K=1 TO 30:SOUND 0,55,8,10:NEXT K
1030 COLOR 1:PLOT SX(I),SY(I):PLOT SX(
I)+1,SY(I):PLOT SX(I),SY(I)+1:PLOT SX(
I)+1,SY(I)+1
1040 FOR K=1 TO 30:SOUND 0,0,8,10:NEXT
K
1050 COUNT=COUNT+1:NEXT I:RETURN
1060 DATA -3,-1,3,1,-3,-2,3,-2,-2,-3,-
2,-3,0,-3,0,-3,2,-3,2,-3
1070 DATA -4,-2,4,-2,-4,-1,4,-1,-6,2,6
,2,-4,0,4,0,-4,1,4,1,0,0,0,0,HAT
1080 DATA -5,0,5,0,-5,-1,5,-1,-4,2,4,2
,-4,-3,4,-3,-4,1,4,1,-4,-2,4,-2,0,-6,0
,-6,0,5,0,5,-3,-4,3,-4
1090 DATA -3,3,3,3,-2,4,2,4,-2,-5,2,-5
,0,0,0,0,BALL
1100 DATA -6,4,8,4,4,3,7,3,5,2,6,2,6,1
,6,1,-4,3,-4,-1,-3,3,-3,-2,-2,0,-2,-3,
-1,0,-1,-4,0,3,0,-5
1110 DATA 1,3,1,-4,2,3,2,3,2,0,2,-3,3,
3,3,-4,4,2,4,-1,0,0,0,0,HOUSE
1120 DATA -2,-6,-2,3,-1,-5,-1,3,0,-5,2
,-3,1,-5,2,-4,0,2,3,5,0,3,2,5,1,5,2,3,
-4,5,-3,4,0,-2,3,0,0,0,0,-3
1130 DATA 1,-3,1,-3,-3,-6,-3,-6,-2,-2,
0,-2,3,-4,3,-4,0,0,0,0,DOG
1140 DATA -1,-4,-1,5,1,-4,1,5,-2,-3,-2
,3,2,-3,2,3,-3,-2,-3,1,3,-2,3,1,0,-5,0
,7,-4,-1,4,-1,3,3,3,3
1150 DATA 4,5,4,5,6,7,6,7,9,9,9,9,0,0,
0,0,KITE
1160 DATA -7,0,-5,0,-3,0,-1,0,0,0,1,0,
3,0,7,0,-6,1,6,1,-5,2,5,2
1170 DATA -5,-1,5,-1,-3,-2,-2,-2,-3,-3
,-2,-3,1,-2,2,-2,1,-3,2,-3,0,0,0,0,BOAT

```



```

1270 DATA -3,1,-2,1,-3,2,-2,4,1,5,1,
4,2,5,2,-5,-2,-5,1,-4,-2,2,-2,-4,0,6,0
,-4,1,-4,1
1280 DATA -1,1,3,1,6,1,6,1,0,-1,0,-1,2
,-1,2,-1,0,0,0,0,TRUCK
1290 DATA 120,10,20,10,100,10,100,10,0
,0,0,0,WHISTLE SOUND
1300 REM TRAIN
1310 DATA -5,-2,5,-2,5,-1,5,1,-5,1,5,1
,-5,0,3,0,-5,-1,-5,-1,-3,-1,-3,-1,-1,-
1,-1,-1,1,-1,1,-1,3,-1,3,-1
1320 DATA -5,-3,5,-3,-6,0,-6,0,-4,2,-4
,2,4,2,4,2,6,0,6,0
1330 DATA -4,1,5,1,-4,0,3,0,5,0,5,-2,4
,-2,1,-2,3,-1,3,-1,1,-1,1,-1,-3,-1,-3,
-2
1340 DATA 5,-3,1,-3,6,0,6,0,-5,0,-5,0,
-3,2,-3,2,-1,2,-1,2,2,2,2,4,2,4,2
1350 DATA -6,0,3,0,-5,1,3,1,-4,2,-4,2,
1,2,1,2,-5,-3,3,-3,-3,-4,1,-4
1360 DATA -4,-2,2,-2,-4,-1,-4,-1,-2,-1
,-2,-1,0,-1,0,-1,2,-1,2,-1

```



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SINCE YOU ASKED ...

by Tom Sturza

From Ruth G.

Q: I would love to see a presentation by a school system that has and uses ATARI computers. What do they do to teach kids computing?

A: We'll refer your question to Mr. Mark Davids, Education SIG Chairman. Look for an answer to your question at a future general meeting.

From Judy Braun

Q: Why not have a close out sale on back issues of the M.A.C.E. newsletter?

A: Great idea Judy! For those of you who are interested, we'll have back issues on sale for \$1.50 at general meetings through the end of the year. Sorry folks, no mail orders.

From Henry Zarski
8035 Theisen
Center Line, MI. 48015
(313) 757-1465

Q: How can I build (or buy) a piece of hardware that will let my ATARI 800 be interfaced with a CATV Switcher, with synchronization of Input/Output?

A: Sorry, this one has us stumped. If anybody out there has an answer for Henry, please write him or give him a call.

From M. Myal

Q: I think it is possible to develop documentation or at least a good description for each (MACE) library disk, based upon a cassette tape (voice) narration by the author. Disks like Pokey, Instedit, in particular, would be good candidates for a trial run.

A: What do MACE members think of the above idea? What would it cost and who would

do it? Let your officers know what you think!

From J. Braun

Q: Can we re-establish the NEW USERS SIG?

A: We'll refer this question to some of our past MACE officers and get their guidance as to what the NEW USERS SIG covered. Watch for announcements on this topic in the near future.

Q: Could we have a bulletin board at meetings so people can post 3x5 cards of (personal) hardware and software that they wish to sell?

Also, from another member, can we provide more "free" advertising space for members?

A: Good ideas, however, all advertising for members is currently done through "free" classified ads in the MACE Journal. This way, even those who don't make it to the meeting will see your ad. If your classified ad reaches the newsletter editor by the first Tuesday of the month, it should be printed in that month's issue.

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PLATO'S CORNER

Before we begin discussing this month's topics, I would like to recommend that everyone read Fred D'Ignazio's article "Islands of Learning" in the October issue of COMPUTE!. Fred's article deals with the problems of bridging the gap between computer education in the home and the attempts being made by our schools. This is an outstanding article and quite thought provoking. I'd be interested in your comments (as would Fred).

As mentioned last month, we'll try to search out some of the better educational programs for review and comments. The first such program is one entitled "PAINT"

PAINT is currently being marketed by Atari and is listed in their latest catalog in the Personal Development section. The program, however, was developed by Superboots Software, a division of Capitol Children's Museum in Washington, D.C.

In 1981 CCM recieved a grant from Atari that included 30 Atari computers. The contribution has allowed the museum to establish a computer learning ceter called Future Center. The center has quickley become one of the top tourist attractions in Washington.

Lets start with the documentation, or should we call it text book. Spiral bound and 176 pages long, it deals with everything from program instructions to art history and computer graphics. There is even an sixteen page color section with reproductions by artists such as van Gogh and Renoir. No complaints here, this is strictly first class.

After booting the disk, a menu allows you to choose from three options: Simple Paint, Super Paint, and Art Show.

Simple Paint is perfect for the little ones around the house. Four brushes, four colors and a mix option keep things workable for the little Picassos.

Painting is accomplished by moving the paintbrush (cursor) around the screen using the joystick.

Super Paint allow you to choose from nine different brushes and nine brush widths, 81 possible combinations! How many colors? At any one time you are limited to four basic colors and six color textures but using the mix option the combinations of colors and textures are almost limitless.

One of the slickest options is Zoom. The artist can instantly enlarge the area the screen being working on so that details can be examined or added to thier masterpiece.

Computer generated circles, rectangles, lines and fills makes artitic expression easy even for the youngest. Most options can be accessed by either the keyboard or joystick and a help screen is available to guide you when necessary. The program is a joy to use and even the youngest should be up and drawing with only a minimum of instructional time.

The final touch is Art Show. The pictures created on th escreen can be saved to disk, then can be arranged, up to 24 at a time, in the format of a slide show on the screen. My congratulations to the people at CCM for developing this program.

REPORT CARD:

One important classification to evaluate is the computer/user index. Does the computer control the user or the user the computer? This ratio is directly proportional to the amount of creative expression and development allowed by the program. To quote a recent NOVA special on PBS concerning computers in education - "the mind is not a vessel to be filled but a lamp to be lit". Paint encourages expression, creativity and experimentation.

Computer/user index	- Outstanding
Ease of use	A-
Educational Value	A-
Documentation	A+

How about a homework assignment? The following listing may be used create your own spelling quiz program. I've intentionally limited its lenthgth so that you might expand it with your own creative touches.


```

10 DIM A$(20),B$(20),C$(1),D$(10)
20 GRAPHICS 2:POKE 710,64:POKE 712,64
30 POSITION 3,5: ? #6;"SPELLING QUIZ":?
"TYPE YOUR NAME":INPUT B$
40 ? "O.K. ";B$;" TOUCH RETURN TO
START":INPUT C$: ? #6;CHR$(125)
50 FOR N=1 TO 500:READ D$
60 POSITION 6,4: ? #6;D$:FOR T=1 TO
1000:NEXT T: ? #6;CHR$(125)
70 INPUT A$
80 IF A$<>D$ THEN ? "SORRY ";B$;" LET'S
TRY THAT ONE AGAIN":FOR T=1 TO
1500:NEXT T: ? CHR$(125):GOTO 60
90 IF A$=D$ THEN ? "VERY GOOD, ";B$:FOR
T=1 TO 1000:NEXT T: ? CHR$(125):NEXT N
100 DATA HOUSE,BOAT,DOG,TREE,OCEAN,
ATARI

```

Simply include Data statements with words from your child's spelling book and you have a program customized to your child's specific needs. Lets see who can develop the best variation of this program and we'll include it in our educational program library.

If you have any comments, suggestions or donations to the educational program library please write:

Plato
552 Pinehurst
Rochester, MI.
48063

"GULP!!" and "ARROW GRAPHICS"
from EduFun! MathFun!
Review by Tom Sturza

Available on cassette(16K) or disk(32K).
Requires: Atari computer, cassette recorder
or disk drive, and Basic cartridge.
Comes with: Program, User's Guide, and
reusable score/practice card.
Recommended for children ages 7-12.

GULP!! (addition and multiplication drill)
"The race is on ... how quickly can you add or
multiply? ... faster, faster ... don't get caught
... watch out for those jaws!"

Good graphics! The big fish is trying to catch the little fish, object - dinner! Only you can save the little guy. How? By answering the math problems quickly and correctly. Take too long or answer incorrectly, and the big fish gains on the little fish.

Sounds interesting, doesn't it? It is, but it can be frustrating too! This program is designed as a drill, not as a teaching tool on how to add or multiply. A seven or eight year old may not be able to answer the problems fast enough (or correctly). Math problems are not always presented in a $9+3=?$ format. $?+3=12$ or $9+?=12$ are also used. If a child isn't familiar with the key board, valuable time can be lost trying to find the right key(s) to depress.

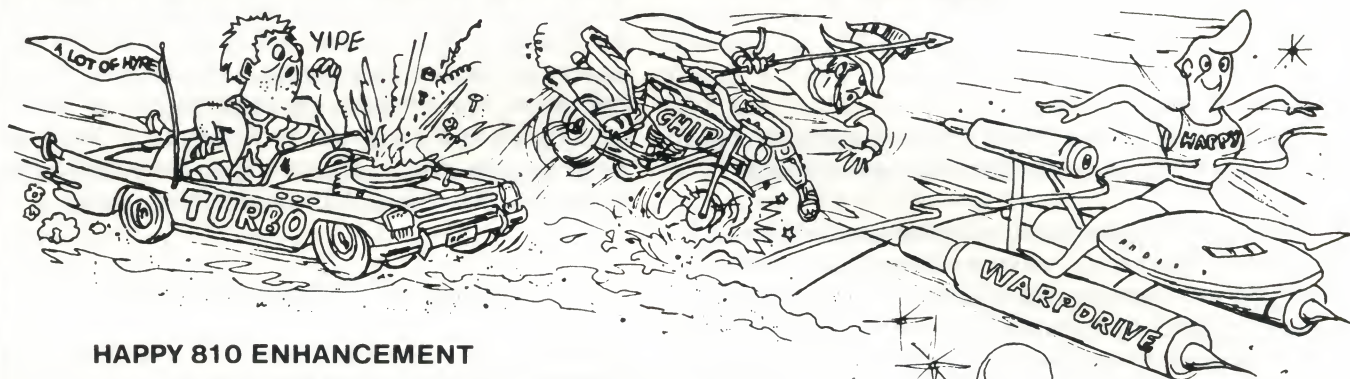
If you answer 20 problems without having the little fish eaten, you then get to go fishing for numbers in the BONUS game. Great fun, but I found one minor problem (in my opinion). The score that gets saved (in the disk version) is for the BONUS game, not for the percent of correct vs. incorrect answers. I really can't tell from the score board if my son is doing better on his math, or in using the arrow keys to catch numbers.

Also included is a program called "ARROW GRAPHICS" (problem solving and directionality). "Follow the traveling arrow ... where did it go? ... left or right ... in how many steps? ... retrace its path ... ring up those points!"

I found this program to be a lot of fun and a good learning experience for my son. Solve three patterns in a row, and as a BONUS, you get to enter your own pattern for the computer to draw.

The User Guide is well written, as are the instructions provided when you run the programs. Overall, my son and I really enjoy "GULP!!" and "ARROW GRAPHICS". I would recommend this software to those of you who have children in the 9-12 age bracket. Ages 7-8 may be a little too young to really enjoy this software.

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ENHANCED 810 whole disk (any format) read time with standard software: 68 seconds

ENHANCED 810 whole disk (any format) read time with WARP DRIVE software: 43 seconds

Standard software whole disk write and verify time: 238 seconds

WARP DRIVE software whole disk write and verify time: 62 seconds

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- Requires only one ENHANCED disk drive, backups will work on a standard drive

WARP SPEED MULTI DRIVE HAPPY BACKUP PROGRAM

- Same features as above plus support of multiple ENHANCED drives
- Can be used with up to 4 ENHANCED drives
- Source and all destination drives read and write in parallel
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- Warp speed I/O software module available separate from DOS

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REVIEWED IN POPULAR MAGAZINES

ANALOG COMPUTING—July/August 1983 "...The installation instructions for the Happy 810 Enhancement are among the best I have ever seen. ...The Happy 810 Enhancement is one of the most powerful hardware modifications available to ATARI computer owners."

ANTIC—July 1983 "The difference between a normal ATARI 810 disk drive and one equipped with Happy is like the contrast between mass transit and the automobile. A car costs you more initially, but improves the quality of your life. Similarly, if you use your disk drive a lot, installing Happy will markedly enhance your programming life."

SPECIAL SUGGESTED RETAIL PRICE BEFORE DECEMBER 31, 1983: Get the HAPPY 810 ENHANCEMENT with the single and multi drive HAPPY BACKUP PROGRAM, plus the HAPPY COMPACTOR PROGRAM, plus the HAPPY DRIVE DOS, plus the HAPPY SECTOR COPY, all with WARP DRIVE speed, including our diagnostic for \$249.95. Existing registered ENHANCEMENT owners may upgrade to WARP DRIVE speed for \$15.00 with no hardware changes!

Price includes shipping by air mail to U.S.A. and Canada. Foreign orders add \$10.00 and send an international money order payable through a U.S.A. bank. California orders add \$16.25 state sales tax. Cashiers check or money order for immediate shipment from stock. Personal checks require 2-3 weeks to clear. Cash COD available by phone order and charges will be added. No credit card orders accepted. ENHANCEMENTS for other ATARI compatible drives coming soon, call for information. Please specify -H model for all drives purchased new after February 1982, call for help in ENHANCEMENT model selection. Dealers now throughout the world, call for the number of the dealer closest to you.

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SPELUNKER
Review By
Martin A. Siml

I was recently able to evaluate a new software offering from Micro Graphic Image.

This great game has a scenario as follows: You are a spelunker (cave explorer) wandering through an underground system of tunnels and caves. Part of the complex is an old mine, with some of the cars and conveyer belts still working. Also scattered through the mine are sticks of Dynamite, and flares. You wander through the caverns collecting scattered treasures, dynamite, flares, batteries, keys, and mysterious power points. You are assisted by elevators, mine cars, ropes, and ladders. Pitfalls, radiation, smoking fumerals, hot spots, and man traps lay in wait for the unsuspecting spelunker. Bats fly around in places dropping things which can kill you. Luckily they flee from any flares you may set off. However, you better have enough room overhead to set off the flares, and don't let the flare hit you. Ghosts of previously failed spelunkers actively pursue you in the caverns. You may temporarily blow them away with a portable fan you are carrying. This helps consume your portable battery which powers your headlamp faster, causing you to replenish it more often. If you do not you die. Some obstacles in your path can be removed by placing and lighting dynamite. You had better be far away when it goes off, or you may go up with it too.

The game plays extremely well, and has all the best points of Miner 2049'r, Pharaoh's Curse, and Donkey Kong all rolled into one. The playing field consists of over thirty continuously scrolling scenes. The spelunker is joy stick controlled. As you move from screen to screen the graphics scroll smoothly, however it is possible to walk off screen temporarily and into an unseen trap, that is clearly visible when the screen has scrolled. The programmer Tim Martin seems to have taken advantage of this in several areas to trap the unwary. The screens are contained in the Atari's memory and you do not have to access the disk for each screen.

The game plays very smoothly and not very easy, about on a par with Miner 2049'r. With

practice comes deeper penetration into the caverns. Extra lives are obtained sometimes by finding the power points. Points are scored by collecting items which show on the bottom of the screen. A high score is saved, as long as the program is loaded, it does not save to the disk. All in all a very enjoyable program. Warning: It is an adicting game.

NEXT MONTH

MACE's December meeting will deal with TELECOMMUNICATIONS and the ATARI. You'll learn about the world famous AMIS bulletin board system and its inner workings. The MACE TERMINAL will be discussed by its author (and equally world famous) Tom Giese, and many, many more interesting telecommunications demos. Along with our usual game and software reviews, you're sure to want to be here on December 20th.

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"FUN WITH ART"

A Software Review
By Fred Parr, Jr.

According to the promotional literature enclosed with this ROM cartridge "Fun with Art" was designed primarily for children aged five through ten years, although players of any age should be able to unleash their creative skills through this program and gain great satisfaction from the masterpieces they create! Well, let's see how that stacks up with my experience.

First of all I'd agree with their choice of primary age groups. The fine motor skills needed to manipulate a joystick begin to develop around the age of five years. At this point in a child's growth a good drawing program could promote increased eye-hand coordination and thus enhance their fine motor skills. The question is whether the program is sufficiently easy to use so that the young artist will not become frustrated in the process of artistic creation.

Basically, the only components required are a joystick and the computer keyboard. To store your pictures you will also need either a disk drive or program recorder. The joystick performs all the actual drawing functions within the program and the keyboard "START" button provides the toggling between the drawing menu and the "drawing board" (TV screen) itself. While drawing the cursor's speed (as directed by the joystick) can be increased by pressing the OPTION key or decreased by pressing the SELECT key.

A half hour's practice enabled me to produce reasonably elaborate pictures with a limited amount of text interspersed among the picture elements. I must admit the results of my labors were rather gratifying. Some functions did not perform as easily as they could have (for example, the drawing and positioning of multiple circle elements) but all in all the program functioned smoothly and accurately. The biggest drawback I noted was the somewhat awkward nature of having to use a joystick for the positioning of the drawing cursor. Practice and patience are required!

There are more elaborate drawing programs

on the market and many of these make use of outboard peripherals such as touch sensitive drawing pads. However, they are considerably higher priced and may provide more utility than you require. I would recommend anyone interested in a drawing program to visit their favorite computer store and ask for a hands-on demonstration of all available products before making a purchase.

Any reservations? Only one, and this applies to all drawing software I have seen so far. While "Fun with Art" (and others) allows you to save your creations to disk or tape none I have seen so far will allow you to dump your pictures to a printer. Such an option would increase the enjoyment and utility of the software immensely.

"Fun with Art" is produced by EPYX Computer Software and requires a minimum of 32K RAM. The suggested retail price is \$40.00 although many retailers will sell it for considerably less.

In the coming months I hope to evaluate other drawing packages including the Koala Pad Touch Tablet and the Power Pad by Chalk Board.

FPjr



HAPPY 810 ENHANCEMENT

By Martin A. Siml

Your author has been an owner of a Happy Enhancement for his 810 awhile now, and knows several other owners of the Happy. This review is to present some otherwise overlooked facts to the reader's attention.

I don't know why, maybe its because people don't want to admit to errors, but I very seldom read reviews with any or very few negative comments. I may be very opinionated, but whenever you read anything written by me, I will try to be completely candid. With that off my chest, let us get on with the review.

As some of you know, I have been a computer hardware technician for 16 years now, on the big stuff. While I find the Happy the easiest way for the non-technical types to make backup copies on, it has many problems. The following is a sampling of what others and myself have experienced with the Happy.

HEAT The Happy drive has a very bad heat buildup problem. This is due to the fact that several chips have been added inside the metal box on the disk drive. This metal box is designed to cut down any radiated noise to the rest of the circuitry. This noise would then cause a degradation of the operation of your system, and interference on your TV. The box which completely encloses the "smart" portion of the circuitry, is where the Happy is installed inside. As a result there is no cooling air circulation. When the heat builds up, the Happy responds by slowing up the motor on the disk drive. This causes many read/write errors especially on the inner tracks where the bits are written closer together. Copies made at this time have a good chance of not being compatible with anything else, and in many cases not even compatible with itself. Also at this time the Happy will reject many disks as unwritable, and will not format.

VIBRATION It has also been observed that after much use of disk drive, the inner tracks become unreadable, even on known good disks. The solution for this has proven in every case, to be disassembly of the drive and to reseal the Happy Enhancement. This becomes very

tedious, happily it doesn't happen very often.

TIME The Happy is the easiest way I have found to make backup copies of protected software. However, the copy process is very slow, and seems to take forever, especially when one is making more than one copy. I use my Happy as a last resort when backing up software. Only when other methods have failed, do I use the Happy, because of its slowness.

COMPATABILITY The Happy claims to be compatible with any 810 disk drive. I have found this to be an overstatement. About 6% of the backup copies will not run on any other drive, except the original Happy, this includes other Happy drives. 10 to 15% of Happy software will not run on the Percom. Other drives have a compatibility problem to a lesser or greater degree. This especially becomes irksome if one has more than one brand of drive, as I have. Happy's official answer to this problem, is that there is something wrong with your original drive, either the speed or the write current. I went and set up my NEW 810 to Atari specs, using the Atari procedure. Write current and head alignment was totally checked out using expensive test equipment, and my Happy was still not totally compatible as claimed.

BACKUP CAPABILITY As of this writing there is a protection scheme that can not be backed up with a Happy. It seems that Electronic Arts is having a war with Happy. This is the second time that they have come up with a scheme that thwarts the Happy. (I am referring to the protection scheme on Hard Hat Mack.) The first scheme was eventually defeated by Happy with software release 4.0. At that time Happy wrote a very self righteous release about software houses trying to protect themselves from the Happy. Well it seems Electronic Arts has taken up the challenge. Happy guarantees your ability to backup any software. It has some fine print however. You may have to wait while Happy figures out what to do, and then pay for the new software (a nominal fee). Also they don't notify you of the new release, that is up to you.

SUPPORT One of the most critical things when buying a piece of hardware is customer support. Happy needs a course in customer

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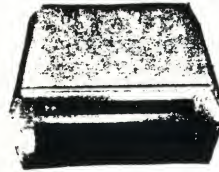
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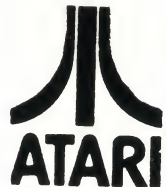
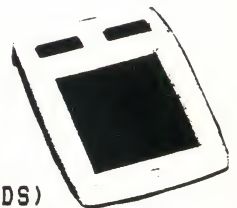


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relations. When you call the number provided by Happy for support, if you get an answer, the speaker is very surly. When I was trying to get information regarding my drive, the speaker was very rude, and did not care to listen to my problems. He seemed to be fed up with the world. When one pays in excess of \$200 for a piece of hardware one expects at least a modicum of politeness. You will have a hard time getting any from Happy. They seem to take the position that the customer should be glad that they took the trouble to make the Happy. For a lesson in surliness, call Happy customer support, if you dare.

After all the negative things I have said above, it still is the easiest way to backup most protected software.



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